Result & Analysis

Student: Valliappan L Test: SIST_2023_SEAT_001 Course: 2023 SEAT Tests

Attempt 1

IP Address: 122.164.69.83 **Tab switches:** 0 **OS used:** Windows **Browser used:** Chrome

Test Duration: 01:30:00 **Test Start Time:** Dec 8, 2021 | 10:01 AM

Test Submit Time: Dec 8, 2021 | 11:31 AM

Overall score

Rank: NA
Topper score: 71.00 / 90
Average score: 25.77 / 90
Least score: 0.00 / 90

Quants

Rank: NA
Topper score: 18.00 / 20
Average score: 7.21 / 20
Least score: 0.00 / 20

Reasoning

Rank: NA
Topper score: 19.00 / 20
Average score: 7.38 / 20
Least score: 0.00 / 20

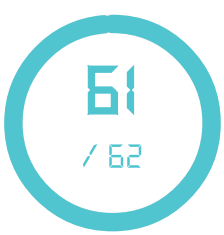
Verbal

Rank: NA
Topper score: 20.00 / 20
Average score: 9.71 / 20
Least score: 0.00 / 20

Programming

Rank: NA
Topper score: 30.00 / 30
Average score: 1.46 / 30
Least score: 0.00 / 30

Overall Question Status



Total Questions: 62
Questions Attempted: 61
Questions Correct: 21
Question Wrong: 39
Partially Correct: 1

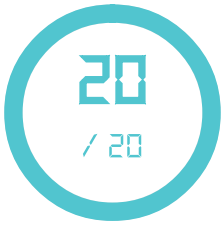
Quants - Question Status

Total Questions: 20
Questions Attempted: 20
Questions Correct: 8
Question Wrong: 12
Partially Correct: 0

Question Not Viewed: 0

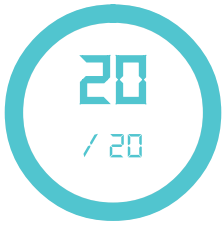
Question Not Viewed: 0

Reasoning - Question Status



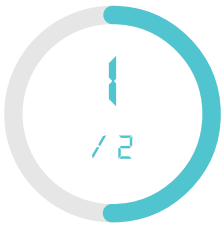
Total Questions: 20
Questions Attempted: 20
Questions Correct: 6
Question Wrong: 14
Partially Correct: 0
Question Not Viewed: 0

Verbal - Question Status



Total Questions: 20
Questions Attempted: 20
Questions Correct: 7
Question Wrong: 13
Partially Correct: 0
Question Not Viewed: 0

Programming - Question Status



Total Questions: 2
Questions Attempted: 1
Questions Correct: 0
Question Wrong: 0
Partially Correct: 1
Question Not Viewed: 0

Topic wise Analysis Quants Reasoning Ver

Question No: 1 **Multi Choice Type Question**

If the volume of a cube is increased by 33.1%, find the percentage increase in its surface area.

- 29%
- 30%
- 24%
- 21% CORRECT

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Percentages

Show solution

Solution 1:

Let the side of the cube be 10x cm

Surface area of the cube = $600x^2$ cm^2

The volume of the cube is $1000x^3$.

ATQ, volume of cube after 33.1% increment = $1331x^3$ cm^3
So, the side of the cube after increment is 11x cm

Now, Surface Area of cube after increment = 6 * $121x^2$ = $726x^2$ cm^2

So, required change = $126x^2$ / $600x^2$ * 100 = 21%

Question No: 2 **Multi Choice Type Question**

How many different ways are there to select 4 students for a team from 6 students of age 12 and 4 students of age 13, such that at least one student from age 12 group should be present in it?

- 209 CORRECT
- 205
- 194
- 159

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Combination

Show solution

Solution 1:

We may have 1 student from age 12 group and 3 students from age 13group or 2 students from age 12 and 2 students from age 13 or 3 students from age 12 and 1 student from age 13 or 4 students from age 12

required number of ways = (6C1 * 4C3) + (6C2 * 4C2)+(6C3 * 4C1) + 6C4
= (6C1 * 4C1) + (6C2 * 4C2) + (6C3 * 4C1) + 6C2
= 24 + 90 + 80 + 15 = 209

Question No: 3 **Multi Choice Type Question**

One card is picked randomly from a pack of 52 playing cards. What is the probability that it would either be black queen or red king?

- 1/13 CORRECT
- 1/4
- 1/2
- 13/52

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Probability

Show solution

Solution 1:

There are 2 black queens and 2 kings in a set of 52 playing cards,
So, Required Probability = $(2C_1)/(52C_1) + (2C_1 / 52C_1) = 1/13$

Question No: 4 **Multi Choice Type Question**

In his room, Charan has trousers one being Red and the remaining being Yellow and Green. He also has got four shirts where One of them is red and the other 3 are white. He opens his room in the dark and picks out one shirt and one trouser pair without examining the color. What is the likelihood that neither the shirt nor the trouser is red?

- 1/12
- 1/6
- 1/2 CORRECT
- 1/3

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Hard
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Probability

Show solution

Solution 1:

The probability that trouser is not red = 2/3

The probability that the shirt is not black = 3/4

Required probability = 2/3 * 3/4 = 1/2

Question No: 5 **Multi Choice Type Question**

Amulya invests a sum of money in long term scheme which is SI for 7 years which offers a rate of 8%p.a . The amount she got from that scheme after 7 years was again invested in another short term scheme for 2 years which offers CI rate of 10%p.a. If the interest received from short term scheme was Rs. 1638, then what is the sum invested in long term scheme ?

- Rs.7500
- Rs.5000 CORRECT
- Rs.8200
- Rs.9000

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Hard
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Simple Interest

Show solution

Solution 1:

SI =>Amount = x*8*7/100 + x

= 56x+100x/100 = 156x/100 = 39x/25

CI=> 39x/25 $[(1+10/100)^2 - 1]$

1638 = 39x/25 [121/100 – 1] = 39x/100[21/100] X = 1638*100*25/21*39 = 5000

Question No: 6 **Multi Choice Type Question**

Ranjith picks a card at random out of 52 cards. If he picks a black card or a number six from the deck. What is the probability of that ?

- 1/13
- 9/13
- 7/13 CORRECT
- None of these

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Hard
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Probability

Show solution

Solution 1:

We need to find out P(B or 6)

Probability of selecting a black card = 26/52

Probability of selecting a 6 = 4/52

Probability of selecting both a black card and a 6 = 2/52

P(B or 6) = P(B) + P(6) – P(B and 6)

= 26/52 + 4/52 – 2/52

= 28/52

= 7/13.

Question No: 7 **Multi Choice Type Question**

Find the unit digit of $73^{21} * 256^{444}$

- 6
- 4
- 2
- 8 CORRECT

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Number systems

Show solution

Solution 1:

We will consider only the unit digits from the given numbers.
So,

Unit digit of 3^21 = 3

$6^1 = 66^2 = 36$, $6^3 = 216$
6 raised to any power the unit digit is always 6

= 3 * 6 = 1**8**
Hence, Unit digit of the expression is 8

Question No: 8 **Multi Choice Type Question**

Nihal recently studied in an article that cars in recent days are priced based on the engine capacity, i.e. the price is directly proportional to the square of engine capacity (in litres). When he checked the showroom price of car X , he noticed that the ratio of the price of a car in the current year to its price in previous years is always 6:5. If the price of a 1.2-litre engine car in 2014 was Rs.300000, then what would be the price of a 2.5-litre engine car in 2017?

- Rs.1250000
- Rs.1500000
- Rs.2250000 CORRECT
- Rs.2500000

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Hard
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Ratio and Proportion

Show solution

Solution 1:

Price of car X is directly proportional to square of engine capacity.
⇒ Price of car = (engine capacity)^2

(Price of car X of 1.2-liter engine)/(Price of car of 2.5 liter engine) = $(1.2)^2/(2.5)^2$

⇒ Price of car of 2.5 liter engine in 2014 = $(2.5 \times 2.5 \times 300000)/(1.2 \times 1.2)$ = 1302083.33

Also, we know that the ratio of the price of car in current year to previous year is 6:5.

⇒ If price of car in 2014 is T, then in 2015 it will be 6T/5 = 1.2T,

and in 2016 it will be 6(1.2T)/5 = 1.44T,

and in 2017 it will be 6(1.44T)/5 = 1.728T.

Price of car of 2.5 liter engine in 2017 = 1.728 × 1302083.33 = Rs. 22, 50,000

Question No: 9 **Multi Choice Type Question**

A merchant marks his goods at Rs. 600 and allows a discount of 25%. If he still gain 12.5%, then the cost price of the article is:

- Rs.405 CORRECT
- Rs.420
- Rs.425
- Cannot be determined

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Profit and Loss

Show solution

Solution 1:

M.P= 600
Discount %= 25%
Hence, SP= 450
Profit%= 11.11%
111.11% of CP = 450
(10/9)CP= 450
CP = 405

Question No: 10 **Multi Choice Type Question**

Simple interest on capital is 49/400 of the capital. Find the rate percent and time period, if both are numerically equal.

- 2.5% and 2.5 years
- 4% and 3.5 years
- 4% and 4 years
- 3.5% and 3.5 years CORRECT

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Hard

Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Compound interest

☑ Show solution

Solution 1:

Let the rate of interest be X% p.a and the time be X years.

As per questions, 49 / 400 = x^2 / 100

So, X = 3/5% and 3.5 years

Question No: 11 **Multi Choice Type Question**

The ratio of father's age to his son's age is 9 : 4. The product of their age is 1764. The ratio of their ages after 7 years will be

- ○ 3:2
- ○ 1:1
- ○ 1:3
- ○ 2:1 CORRECT

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Medium

Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Ratio and Proportion

☑ Show solution

Solution 1:

Given, ratio of the father's age to his son's age is 9: 4. Let their ages be 9x and 4x respectively.

Given, product of their age is 1764

$\therefore 9x \times 4x = 1764$
$\Rightarrow x^2 = 49$
$\Rightarrow x = 7$

Father's present age = 9 x 7 = 63
Son's present age = 4 x 7 = 28

Ratio of their ages after 7 years = (63 + 7)/(28 + 7) = 70/35 = 2:1

Question No: 12 **Multi Choice Type Question**

The average age of a family of 4 members 3 years ago is 21 years. A baby has born and now the average age of the family remains the same. Find the age of the baby.

- 4 yrs CORRECT
- 9 yrs
- 10 yrs
- 11 yrs

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Averages

Show solution

Solution 1:

Total age of 4 members of family 3 years ago = 21 * 4 = 84 years

Present age of 4 members would have been = (84 + 4*3) = 96 years.

Now, present average of 5 members of family = 20 * 5 = 100 years

Age of the baby is = 100 - 96 = 4 years

Question No: 13 **Multi Choice Type Question**

If two dices are rolled together, then find the probability of getting a number on one dice greater than the number on the other dice?

- 2/7
- 5/6 CORRECT
- 1/4
- 1/6

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Probability

Show solution

Solution 1:

Total number of cases when two dice are rolled simultaneously = 36

Total cases of getting a number on one dice greater than the number on other dice = 1 - Total cases of getting same number on both dice.

= 1 - 6 / 36 --------->we got 6 cases because (1,1),(2,2),(3,3),(4,4),(5,5),(6,6)

= 1 - 1/6 = 5/6

Question No: 14 **Multi Choice Type Question**

Three groups of students P, Q, and R take up an online test. The average score of group P is 83. The average score of group Q is 76. The average score of group R is 85. The average score of groups P and Q is 79 and the average score of group Q and R is 81. What is the average score of all three groups?

- 81.5 CORRECT
- 78
- 83
- 69

69

Status: Correct **Mark obtained:** 1/1 **Hints used:** 0 **Level:** Hard

Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Averages

Show solution

Solution 1:

Let the number of students in group P, Q and R be A, B and C respectively.
Then, total score of P= 83A, total score of Q = 76B, total score of R = 85C.

Also given that,(83A + 76B) / (A + B) = 79=> 4A = 3B.(76B + 85C) / (B + C) = 81=> 4C = 5B,=>B = 4A/3 and C = 5A/3

Therefore, average score of P, Q, R = (83A + 76B + 85C) / (A + B + C) = 978 / 12 = 81.5

Question No: 15 **Multi Choice Type Question**

In a mixture of 48 litres of water and oil, 2 litres of oil is added. If the mixture initially had oil and water in the ratio of 7 : 5, then what will be the new ratio of oil to water in the new mixture?

- 3 : 2 CORRECT
- 16 : 15
- 1 : 1
- 15 : 16

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium

Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Ratio and Proportion

Show solution

Solution 1:

30 litres of a mixture having oil and water in the ratio 7: 5.

=> Amount of oil = (7/12) x 48 = 28 litres

Amount of water = 48 - 28 = 20 litres.

Now we added 2 litres of oil => Total oil = 28 + 2 = 30 litres.

Total water = 20 litres (as previously) Required ratio = 30:20 = 3:2

Question No: 16 **Multi Choice Type Question**

A game was conducted in a typewriting class, where a candidate has to type/enter all the three digit numbers without space. If made a mistake while typing, the candidate can use the backspace key once for one three-digit number. What is the least number of times a candidate has to press the keys to type all the three digit numbers?

- 2684
- 2700
- 2844
- 2889 CORRECT

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Number systems

☑ Show solution

Solution 1:

(b) He wants to write from l to 999. He has to write 9 numbers of one digit, 90 numbers of two digits and 900 numbers of three digits. Total number of times = 1 × 9 + 2 × 90 + 3 × 900 = 2889

Question No: 17 **Multi Choice Type Question**

In a party hall, 10 persons are to be arranged around a round table. If two particular persons are not to be seated side by side, then what is the total number of arrangements?

- 9 * 10!

7 * 8! CORRECT

35 * 7!

40 * 6!

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Hard

Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Permutation

Show solution

Solution 1:

No. of ways to arrange 10 persons around the table = (10 – 1)! = 9!
No. of ways in which 2 particular persons sit side by side = 8! * 2!

Therefore, required no. of arrangements = 9! – (8! * 2!) = 9 * 8! – 8! * 2 * 1 = (9 – 2) * 8! = 7 * 8!

Question No: 18 **Multi Choice Type Question**

The speed of boat in downstream is 'X-4' kmph and ratio of time taken by a boat to cover a certain distance in upstream to downstream is 2 : 1. If boat takes 5 hours to Cover 40 km in Upstream, then find the value of X?

10 km/hr

12.5 km/hr

14 km/hr

20 km/hr CORRECT

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium

Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability

Subject: Time, Speed And Distance

Show solution

Solution 1:

Let the speed of the boat in still water and the speed of stream be P and Q kmph respectively.

As per questioin, P - Q = 40/5 = 8kmph (Upstream Speed)

P + Q = 16kmph (Downstream Speed)

So, Downstream speed, X - 4 = P + Q

-> X = 16 + 4 = 20kmph

Question No: 19 **Multi Choice Type Question**

Jaiswal plans a small business by starting a mini travels. So he purchased a 40 seater bus. He started his services on route number 2 (from Dwaraka vilas to Nawab Palace of length 50 km).His profit (p) from the bus depends on the number of passengers , over a certain minimum number of passengers 'n' and upon the distance travelled by bus. His profit is Rs.3600 with 29 passengers in the bus for a journey of 36 km and Rs. 6300 with 36 passengers in the bus for a journey of 42 km.

What is the minimum number of passengers that are required so that he will not suffer any loss?

- 12
- 20
- 18
- 15 CORRECT

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Medium
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Number systems

☑ Show solution

Solution 1:

The minimum number of passengers n, at which there is no loss and number of passengers travelling = m
and let the distance travelled be d, then P is proportional to (m-n)d

i.e.,P =k(m-n)d;
k is a constant.when P =3600, m=29 and d =36
then 3600 =k(29 –n) × 36

Again, when P=6300, m=36, d=42,
then
6300 =k(36 –n) × 42

Dividing equation (2) by (1)

6300/3600 = k(36 –n) × 42/k(29 –n) × 36
=> 36-n/29-n =9/6
=> 3n =45
=> n =15
Hence to avoid loss, minimum number of 15 passengers are required.

Question No: 20 **Multi Choice Type Question**

Precious stones are always known for its value growth that it builds over years. If for an example, the precious stone Ruby whose present value is Rs. 7500, increases 25% every year. What was the price of this Ruby 2 years ago (in Rs.)

- 4800 CORRECT
- 5200
- 6200
- 5700

Status: Wrong **Mark obtained:** 0/1 **Hints used:** 0 **Level:** Hard
Question type: MCQ Single Correct **Subject:** Aptitude **Subject:** Quantitative Ability
Subject: Percentages

☑ Show solution

Solution 1:

Let 2 years ago the price of Ruby be Rs. P
1 year ago,
Price of Ruby = P + 25% of P = 1.25 P
This year,

Price of Ruby = 1.25 P + 25% of (1.25 P) = 1.5625 P
⇒ 1.5625 P = 7500
⇒ P = 4800